

Report To: Halton-Hamilton Source Protection Committee
Report No.: SPC-23-09-05
From: Martin Keller, Senior Manager, Watershed Planning and Source Protection, mkeller@hrca.on.ca
Date: September 26, 2023
Subject: Update – 2021 Technical Rules Implications

Recommendation

THAT the Halton-Hamilton Source Protection Committee receives for information the staff report SPC-23-09-02 Update – 2021 Technical Rules Implications.

Executive Summary

Staff are continuing to analyze the implications of the updated technical framework and revised 2021 Technical Rules under the *Clean Water Act, 2006*, including revised circumstances for identifying significant drinking water threats in the Halton-Hamilton Source Protection Region (HHSPR). On September 13, 2023, a Municipal Working Group meeting was held with representatives from municipalities in the Halton-Hamilton Source Protection Region. Work carried out thus far, including implications as a result of the changes in the 2021 Technical Rules, management intent and policy tools available for the application, handling and storage of commercial fertilizer, and handling and storage of pesticides are provided in this report.

Report Background

In December 2021, the Ministry of the Environment, Conservation and Parks (MECP) revised the Technical Rules under the *Clean Water Act, 2006*. The rules are available at: <https://www.ontario.ca/page/2021-technical-rules-under-clean-water-act>

The recently submitted and approved comprehensive HHSPR updates under Section 36 of the *Clean Water Act, 2006* were undertaken following the 2017/2018 Technical Rules. The 2021 Technical Rules will apply to subsequent Assessment Report and Source Protection Plan updates at HHSPR.

For each of the threat activities discussed below, staff reviewed the 2021 Technical Rule changes, and presented and discussed proposed options with municipal staff and Risk Management Officials (RMO) at the September 13, 2023 Municipal Working Group meeting. Discussions on these options are ongoing and the following outline the current direction of policy development and/or revisions, as noted. Changes may be made based on feedback from SPC members and municipal staff.

Application of Commercial Fertilizer

Using GIS techniques staff identified areas in the Halton Hamilton Source Protection Region where the application of commercial fertilizer is or would be a potential significant drinking water threat. These areas include portions of the Kelso, Freelon, Carlisle and Greensville wellhead protection areas. Maps identifying these areas can be found in **Appendix A** of this report.

The intent of the policies addressing the application of commercial fertilizer is to eliminate the application of commercial fertilizers in all WHPA-A areas (existing and future) and to limit or reduce the amount of commercial fertilizer applied in all other vulnerable areas where that activity is or would be a significant risk to drinking water sources.

Appendix A of this report includes images of all WHPA-A vulnerable areas where prohibition policies are proposed. Ortho imagery and land use analysis show limited area where fertilizer application is likely to occur, indicating that a prohibition policy is likely having minimal impact on current practices.

Following discussions with municipal partners and RMOs, Risk Management Plans (RMP) have been identified as an optimal policy tool for mitigating the threat caused by the application of commercial fertilizer. It is the intent to keep Best Management Practices, and Education and Outreach policies in place to further encourage property owners and operators to limit the risk to drinking water sources.

Handling and Storage of Commercial Fertilizer

The 2021 Technical Rules identify any handling and storage of commercial fertilizer in quantities greater than 2500kg, to be a significant drinking water threat in wellhead protection areas with a vulnerability score of 10. The intent of policy development is to mitigate the threat, through a risk management plan, for any existing threats. Staff proposed that any future handling and storage, greater than 2500kg, of commercial fertilizer, shall be prohibited in areas where it would be a significant drinking water threat.

Application of Pesticides

The 2021 Directors Technical Rules no longer distinguish between the type and potential use of pesticides when considering the risk to drinking water sources. Staff analysed ortho photos of all WHPA-A areas within the Halton Hamilton Source Protection Region where this activity would be a significant threat. The resulting images can be found in **Appendix B** of this report. The images were presented at the September 13, 2023 Municipal Working Group meeting and following discussions with RMOs and Municipal partners, prohibiting the application of pesticides in WHPA-A has been identified as a feasible policy tool option. It is proposed that application of pesticides outside of WHPA-A, where the activity

is or would be considered a significant drinking water threat, be managed by a Risk Management Plan.

Handling and Storage of Pesticides

At the September 13, 2023 Halton Hamilton Municipal Working Group meeting, members discussed policy tool options to eliminate and reduce the existing and future risk to drinking water sources, caused by the handling and storage of pesticides. It is the intent of policy development to prohibit the storage of pesticides in all WHPA-A areas where the quantity stored would be greater than 2500kg. In vulnerable areas where the handling and storage of pesticides in quantities greater than or equal to 250kg is or would be a significant drinking water threat, the activity should be managed with a Risk Management Plan.

Municipal Feedback

The proposed policy approaches are based on GIS analysis and an initial review of ortho imagery looking for areas where significant threats may occur or where they may be possible in the future. These areas were presented to municipal staff during our Municipal Working Group meeting. Staff have requested feedback from the municipalities to confirm the findings, with proposed policy approaches subject to change based on feedback received.

Appendix A provides more detail and summarizes the 2021 Technical rules for application, handling and storage of commercial fertilizer and the circumstances that apply to the Halton-Hamilton Source Protection Region, policy intent, favourable policy tools and potential vulnerable areas found during GIS analysis of where the activity could occur.

Appendix B provides more detail and summarizes the 2021 Technical rules for application, handling and storage of pesticides and the circumstances that apply to the Halton-Hamilton Source Protection Region, policy intent, favourable policy tools and potential vulnerable areas found during ortho photo analysis of where the activity could occur.

Next Steps

Discussions with municipal staff are ongoing and staff will bring further updates to future SPC meetings, as applicable. Source Protection Plan updates that are made under S.34 of the *Clean Water Act, 2006* will need to follow the 2021 Technical Rules as required by the legislation.

Signed & respectfully submitted:



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2021 Technical Rule Changes – Commercial Fertilizer

Proposed Policy Concepts

Application of Commercial Fertilizer

Intent – eliminate and minimize the risk to sources of drinking water where the application of fertilizer is or would be a significant drinking water threat.

Tool – Section 57 Prohibition: prohibit the application of commercial fertilizer in WHPA A and Section 58 – RMP: mitigate the risk in all other areas (WHPA B v 10 & WHPA-E v >9) where the application of commercial fertilizer is or would be a significant drinking water threat.

Storage and Handling of Commercial Fertilizer

Intent – eliminate the storage and handling of commercial fertilizer where it is or would be a significant threat.

Tool – Section 57 Prohibition: prohibit the future storage and handling of commercial fertilizer (in any form) over 2500kg in an WHPA with a vulnerability score of 10. Section 58 RMP to mitigate the risk of existing storage and handling of commercial fertilizer where it would be a significant drinking water threat (WHPA v 10).

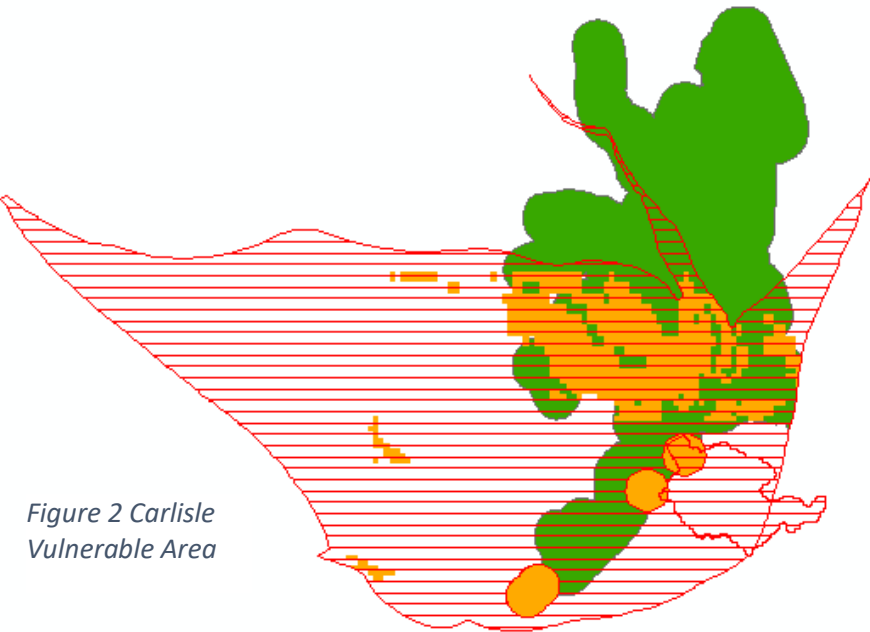
Other tools used include: Best Management Practices for Golf courses and Prescribed Instruments for the Ministry of Agriculture to ensure nutrient management plans are in place to protect drinking water sources where the application of commercial fertilizer is or would be a significant threat.

Threat: Application, Storage and Handling of Commercial Fertilizers

Activity	Existing /Future	Vulnerable Area	Significant Threat VSA	Threshold	Intent	Tool Options	Applicable to HHSPR	Notes
Application of Fertilizer	Existing /Future	WHPA-A	10		Prohibit application of commercial fertiliser	S. 57 Prohibition	All WHPA- A	
Application of Fertilizer	Existing /Future	WHPA-B WHPA-E	10 9-10	Any % Man. Lan. Liv. Den. >1.0 NU/acre	Educate property owners and mitigate threat	S. 58 RMP E&O BMP	Kelso	Figure 1
Application of Fertilizer	Existing /Future	WHPA	10	Man.Lan. >80% Liv. Den. <0.5 NU/acre	Educate property owners and mitigate threat	S. 58 RMP E&O BMP	Greensville	Figure 4
Handling & Storage	Existing	WHPA-A	10	2500kg +	Mitigate Threat	S. 58 RMP	All WHPAs	

						BMP		
Handling & Storage	Future	WHPA	10	2500kg +	Eliminate Threat	S. 57 Prohibition	All WHPAs	

Potential Significant Threat Locations



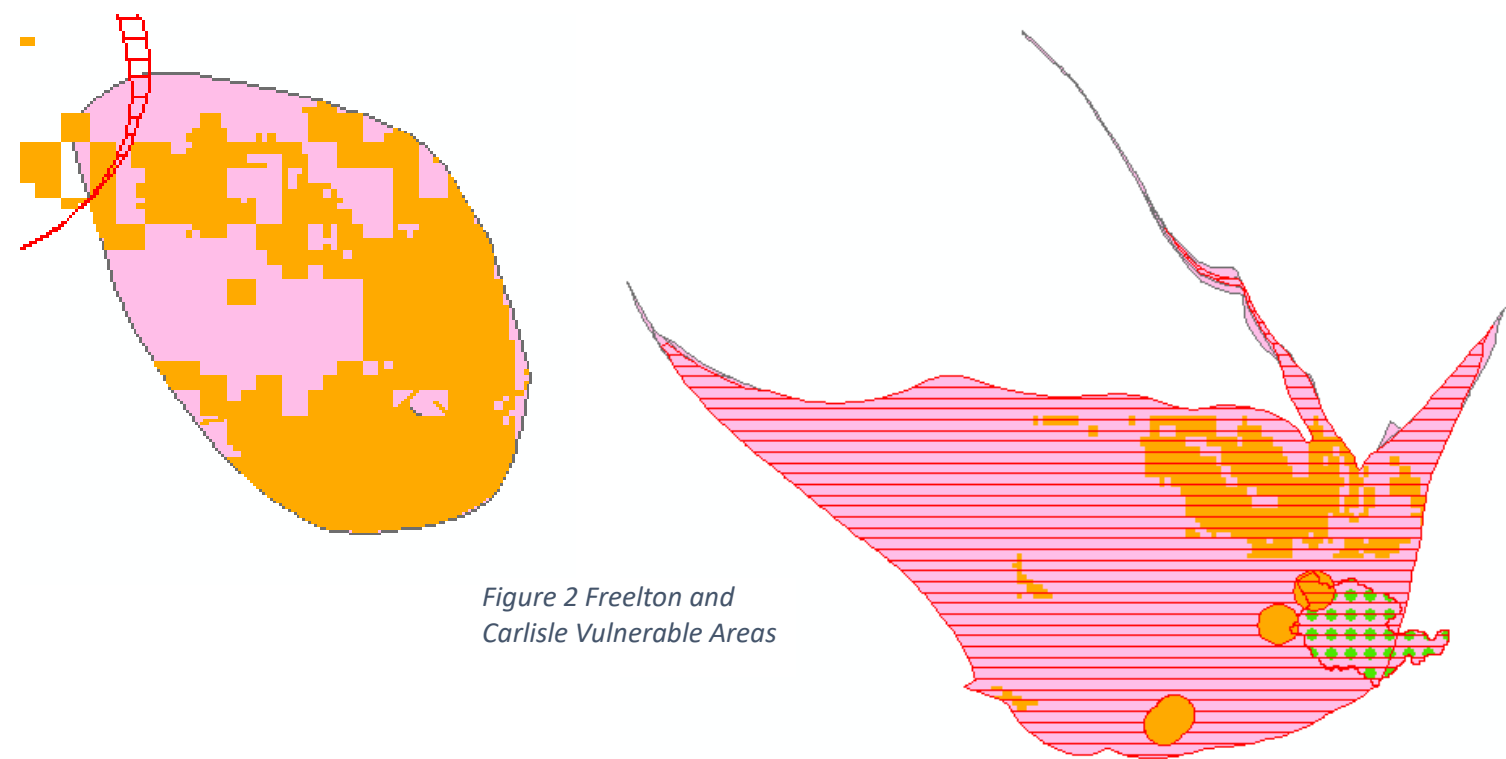


Figure 2 Freelon and
Carlisle Vulnerable Areas

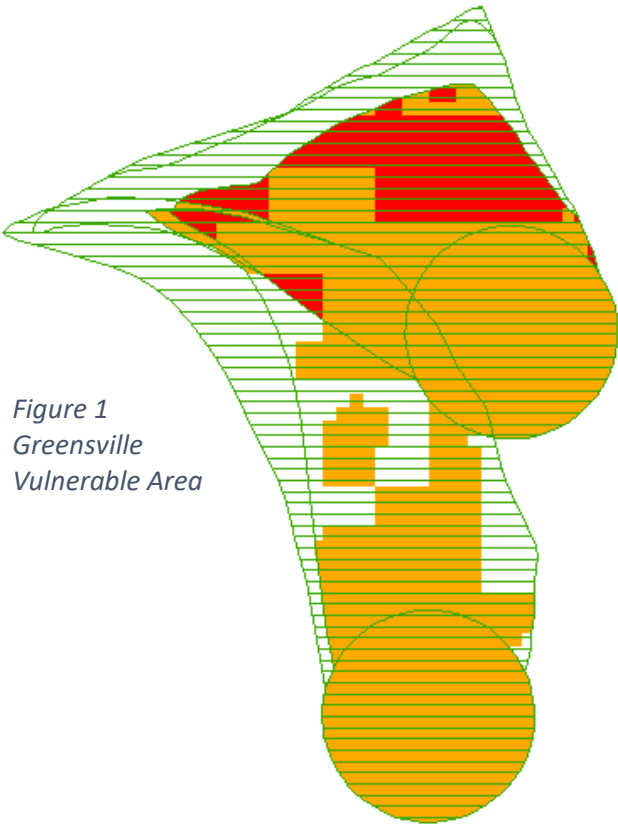


Figure 1
Greenville
Vulnerable Area

WHPA-A – Where prohibition policy for Application of Commercial Fertilizer would apply

Legend

- WHPA-A (prohibition is proposed)
- Drinking Water Well
- Agricultural Land



Figure 5 Kelso WHPA-A



Figure 3 Walkers Line WHPA-A



Figure 7 Campbellville WHPA-A



Figure 4 Carlisle WHPA-A (1)



Figure 9 Carlisle WHPA-A (2)



Figure 10 Greenville WHPA-A (1)



Figure 11 Greenville WHPA-A (2)



Figure 12 Freelton WHPA-A (1)

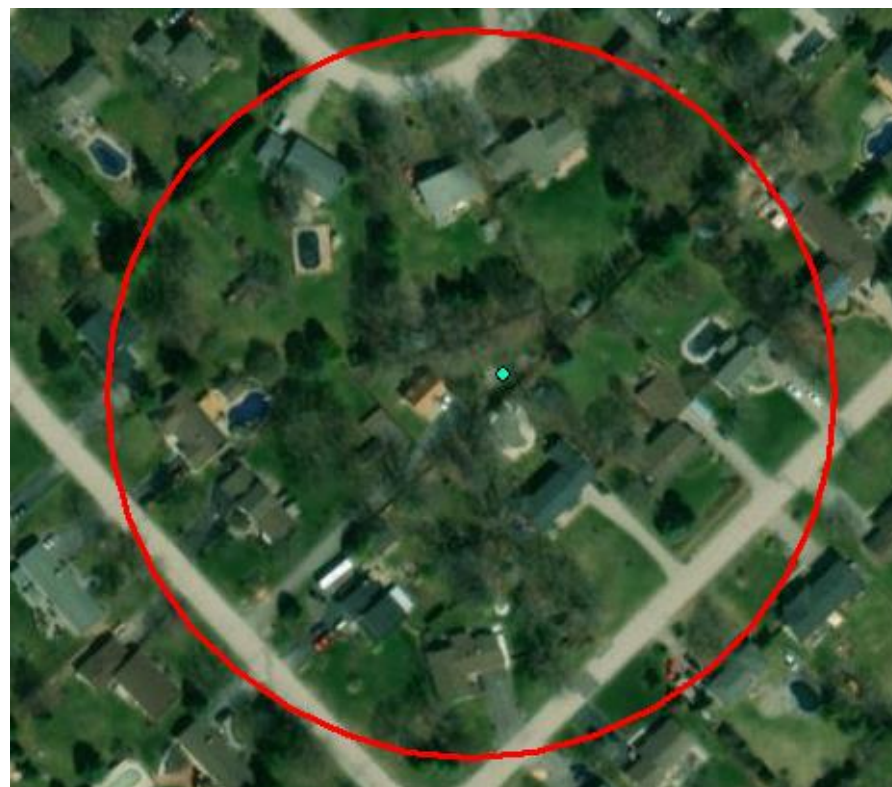


Figure 13 Freelton WHPA-A (2)

Current Policies (Approved Source Protection Plan, November 2022)

Policy ID	T-25-C
Threat	Application of commercial fertilizer to land and storage of commercial fertilizer
Policy Tool	Clean Water Act Part IV – restricted land use and risk management plan
Policy Implementer	Risk Management Official
Policy	<p>Where the existing and future application of commercial fertilizer on farms not phased-in under the <i>Nutrient Management Act</i>, and where the handling and storage of commercial fertilizer on properties would be significant drinking water threats,</p> <ol style="list-style-type: none"> a risk management official shall screen all building permit and <i>Planning Act</i> applications in accordance with policy G-2 for properties where there would be a significant drinking water threat. a risk management official shall establish risk management plans with persons proposing to undertake the activities of the application or storage of commercial fertilizer. The implementation of these risk management plans shall be overseen by a risk management inspector and their content based upon the regulatory requirements of a nutrient management plan under the <i>Nutrient Management Act</i> and best management practices, and scoped to address these specific threats. the risk management official shall document action taken regarding risk management plans for the application, handling and storage of commercial fertilizer in their annual report in accordance with Section 65 of Ontario Regulation 287/07, and the official shall submit this report to the Source Protection Authority by February 1 of each year.
Legal Effect	<p>Part a - Must conform with - legally binding. List I (Appendix C - Compliance Lists).</p> <p>Part b - Must conform with - legally binding. List H (Appendix C - Compliance Lists).</p> <p>(Part c is a monitoring policy)</p>
Where Policy Applies Existing/Future	<p>See Figures 2 to 11.</p> <ul style="list-style-type: none"> Application of commercial fertilizer: WHPA-A & B – V. score 10; WHPA-E – V. score 9. Storage of commercial fertilizer: WHPA-A & B – V. score 10.

Policy ID	T-26-C
Threat	Application of commercial fertilizer
Policy Tool	Prescribed instrument
Policy Implementer	Ministry of Agriculture, Food and Rural Affairs
Policy	<p>Where the existing and future application of commercial fertilizer would be a significant drinking water threat,</p> <ol style="list-style-type: none"> the Ministry of Agriculture, Food and Rural Affairs shall ensure that nutrient management plans required under the <i>Nutrient Management Act</i> include measures that, when implemented, will ensure that this activity never becomes or ceases to be a significant drinking water threat. the Ministry of Agriculture, Food and Rural Affairs shall document the number and locations of properties where nutrient management plans were reviewed, and the measures included that will ensure that this activity never becomes a significant drinking water threat and report this information to the Source Protection Authority by February 1 of each year.
Legal Effect	<p>Part a - Must conform with - legally binding. List C (Appendix C - Compliance Lists).</p> <p>(Part b is a monitoring policy)</p>
Where Policy Applies	<p>See Figures 2 to 11.</p> <p>WHPA-A & B – V. score 10; WHPA-E – V. score 9</p>
When Policy Applies	Existing and Future

Policy ID	T-27-C
Threat	Application of commercial fertilizer to land and storage of commercial fertilizer
Policy Tool	Education and outreach
Policy Implementer	City of Hamilton, Regional Municipality of Halton
Policy	<p>Where the existing and future application, or handling and storage of commercial fertilizer would be significant drinking water threats,</p> <ol style="list-style-type: none"> the City of Hamilton and the Region of Halton shall continue their established, related education and outreach programs. In addition, within two years of the date that the updated Source Protection Plan comes into effect, the City of Hamilton and the Region of Halton, in collaboration with the Halton Region and Hamilton Region Conservation Authorities, are requested to develop and implement education and outreach programs for newly identified threats to promote best management practices regarding these activities for the protection of source water. The target audience will be golf courses, fertilizer application technicians, home and business owners, and retail establishments that apply or store commercial fertilizer. the City of Hamilton and the Region of Halton shall document any new and existing education and outreach programs established regarding the application, handling or storage of commercial fertilizer, the nature of the programs, the number of persons contacted, and the location of the participants and report this information to the Source Protection Authority by February 1 of each year.
Legal Effect	Part a - Must comply with - legally binding. List E (Appendix C - Compliance Lists) (Part b is a monitoring policy)
Where Policy Applies	See Figures 2 to 11. <ul style="list-style-type: none"> Application of commercial fertilizer: WHPA-A & B – V. score 10; WHPA-E – V. score 9. Storage of commercial fertilizer: WHPA-A & B – V. score 10.
When Policy Applies	Existing and future

Policy ID: T-28-C

Threat	Application of commercial fertilizer to land and storage of commercial fertilizer
Policy Tool	Best management practice
Policy Implementer	Municipal planning authority
Policy	<p>For golf course properties located where the existing and future application, or storage and handling of commercial fertilizers would be significant drinking water threats,</p> <ol style="list-style-type: none"> the municipal planning authority shall encourage all operators to obtain and retain Audubon Co-operative Sanctuary Certification. the municipal planning authority shall document the number of golf course operators approached and the number of golf courses with an Audubon Co-operative Sanctuary Certificate and report this information to the Source Protection Authority by February 1 of each year.
Legal Effect	Part a - Must comply with - legally binding. List E (Appendix C - Compliance Lists) (Part b is a monitoring policy)
Where Policy Applies	See Figures 2 to 11. <ul style="list-style-type: none"> Application of commercial fertilizer: WHPA-A & B – V. score 10; WHPA-E – V. score 9. Storage of commercial fertilizer: WHPA-A & B – V. score 10.
When Policy Applies	Existing and future
Notes	The Audubon Co-operative Sanctuary Certification is an award winning education and certification program that provides guidance on environmental protection practices.

Threat	Application of agricultural source material (ASM) to land; storage of ASM; application of non-agricultural source material (NASM) or biosolids to land; storage of NASM; application of commercial fertilizer to land; storage of commercial fertilizer; ASM generation (yards or confinement); ASM generation (grazing and pasturing)
Policy Tool	Other tools: compliance inspections of agricultural operations
Policy Implementer	Ministry of the Environment, Conservation and Parks
Policy	<p>To monitor compliance with nutrient management plans and strategies, non-agricultural source material plans, and Ontario Regulation 267/03 requirements for properties located within vulnerable areas where there are now or potentially would be significant drinking water threats due to the application and storage of agricultural source materials, non-agricultural source materials, commercial fertilizer, and land used for outdoor confinement areas and farm-animal yards,</p> <ol style="list-style-type: none"> the Ministry of the Environment, Conservation and Parks is requested to conduct regular compliance inspections of agricultural operations where significant drinking water threats occur, and shall guide farmers to improve compliance performance, when needed. the Ministry of the Environment, Conservation and Parks shall document the number and location of inspections that were compliant and non-compliant with nutrient management plans and strategies, and non-agricultural source material plans and the actions taken, and report this information to the Source Protection Authority by February 1 of each year.
Legal Effect	Part a - Strategic - non-legally binding. List K (Appendix C - Compliance Lists) (Part b is a monitoring policy)
Where Policy Applies	<p>See Figures 2 to 11.</p> <ul style="list-style-type: none"> Application of ASM to land, storage of ASM, application of NASM, storage of NASM, ASM generation (yards or confinement), ASM generation (grazing and pasturing): WHPA-A & B – V. score 10; WHPA-E – V. score 9 & 8.1. Application of commercial fertilizer: WHPA-A & B – V. score 10; WHPA-E – V. score 9. Storage of commercial fertilizer: WHPA-A & B – V. score 10.
When Policy Applies	Existing and future

Policy ID: T-22-S

Policy ID	T-53-C
Threat	Multiple
Policy Tool	Land use planning
Policy Implementer	Municipal planning authorities
Policy	<p>To facilitate the effective implementation of policies for significant drinking water threats and assist in municipal decision-making,</p> <ol style="list-style-type: none"> the municipal planning authorities are requested to require proponents to disclose whether any of the following activities are expected to occur on the property where they would be significant drinking water threats, proposed storage location, where applicable, as well as the substances utilized or stored and their volume: <ol style="list-style-type: none"> the establishment, operation or maintenance of a system that collects, stores, transmits, treats, or disposes of sewage the application or storage of agricultural source material the application, or handling and storage of commercial fertilizer the application, or handling and storage of pesticide the application, or handling and storage of road salt the storage of snow the handling and storage of fuel the handling and storage of a dense non-aqueous phase liquid the handling and storage of an organic solvent the use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard the establishment and operation of a liquid hydrocarbon pipeline. the City of Hamilton, the Region of Halton, and the County of Wellington are requested to require a full disclosure report as part of a complete application under the <i>Planning Act</i>. Repealed. the municipal planning authority shall report to the Source Protection Authority by February 1 of each year on actions taken to amend municipal documents/processes to require disclosure of threat activities and the number of disclosure reports that were received in the previous year.
Legal Effect	Parts a and b Must conform with - legally binding. List A (Appendix C - Compliance Lists) (Part d is a monitoring policy)
Where Policy Applies	See Figures 2 to 11.
When Policy Applies	Future

2021 Technical Rule Changes – Pesticides

Proposed Policy Concepts

Application of Pesticides

Intent – to eliminate the application of pesticides in WHPA A and to mitigate the risk in WHPA B v 10 and WHPA E >8.1 where the application of pesticide is or would be a significant risk.

Tool – Section 57 Prohibition to prohibit the application of pesticides in a WHPA A. Section 58 RMP used to mitigate the risk of pesticide application for WHPA B with a vulnerability score of 10 and WHPA E with a score >8.1.

Storage and Handling of Pesticides

Intent – to eliminate the future storage and handling of pesticides greater than 2500kg in a WHPA A, where it would be a significant threat and to mitigate the risk of handling and storage of pesticides greater than 250kg where it is or would be a significant threat in WHPA B v 10 and WHPA E score > 9.

Tool – Section 57 Prohibition to prohibit future handling and storage in WHPA A and Section 58 RMP to mitigate existing and future risk. Non- Legally binding Best Practise policy encouraging the Agrichemical Warehousing Standards association to ensure their policies include ways to protect municipal drinking water sources.

Threat: Application, Storage and Handling of Pesticides

Activity	Existing/Future	Vulnerable Area	Significant Threat VSA	Threshold	Intent	Tool Options	Applicable to HHSPR	Notes
Application of Pesticides	Existing/Future	WHPA-A	10	>=1 Hectare	Eliminate the application of pesticides	S.57 Prohibition	All WHPA-A	
Application of Pesticides	Existing/Future	WHPA-E WHPA-B	8.1 -10 10	>=1 Hectare	Mitigate Risk	S.58 RMP E&O	WHPA-B Carlisle WHPA-E	
Storage and Handling	Existing/Future	WHPA-E WHPA-A & B	9-10 10	>=250kg	Mitigate Risk	S.58 RMP	WHPA-B Carlisle WHPA-E	
Storage and Handling	Future	WHPA-A	10	>2500KG	Eliminate risk of storage and handling	S.57 Prohibition	All WHPA-A	

Potential Significant Threat Locations

WHPA-A vulnerable areas where prohibition of pesticides on areas >1 hectare, is proposed.



Figure 1 Kelso



Figure 2 Campbellville



Figure 3 Walkers Line

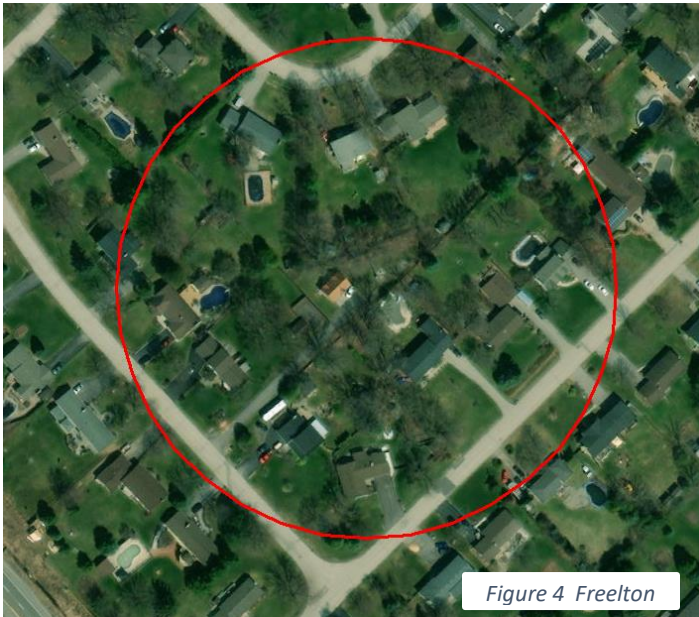


Figure 4 Freelon



Figure 5 Carlisle



Figure 6 Greenville

Current Policies (Approved Source Protection Plan, November 2022)

Policy ID	T-29-C
Threat	Handling and storage of a pesticide
Policy Tool	Clean Water Act Part IV – restricted land use and risk management plan
Policy Implementer	Risk Management Official
Policy	<p>Where the future handling and storage of pesticide would be a significant drinking water threat,</p> <ul style="list-style-type: none"> a. a risk management official shall screen all building permit and <i>Planning Act</i> applications in accordance with policy G-2 for properties where there would be a significant drinking water threat. b. a risk management official shall establish risk management plans with persons proposing to undertake the activities of the handling and storage of pesticide. The implementation of these risk management plans shall be overseen by a risk management inspector. c. the risk management official shall document in their annual report, in accordance with section 65 of Ontario Regulation 287/07, action taken regarding risk management plans for the handling and storage of pesticide and submit this report to the Source Protection Authority by February 1 of each year. d. Repealed.
Legal Effect	<p>Part a – Must conform with - legally binding. List I (Appendix C – Compliance Lists);</p> <p>Part b - Must conform with - legally binding. List H.</p> <p>(Part c is a monitoring policy)</p>
Where Policy Applies	<p>See Figures 2 to 11.</p> <p>WHPA-A & B – V. score 10; WHPA-E – V. score 9</p>
When Policy Applies	Future

Policy ID	T-30-S
Threat	Handling and storage of a pesticide
Policy Tool	Best management practice
Policy Implementer	Agrichemical Warehousing Standards Association
Policy	<p>Where the future handling and storage of pesticide would be a significant drinking water threat,</p> <ul style="list-style-type: none"> a. the Agrichemical Warehousing Standards Association is requested to review their standards to ensure they include appropriate buffer areas and emergency planning and response measures to protect municipal drinking water sources. b. the Halton Region and Hamilton Region Conservation Authorities shall request the Agrichemical Warehousing Standards Association annually to confirm that their standards protect municipal drinking water sources.
Legal Effect	<p>Part a - Strategic - non-legally binding. List K (Appendix C – Compliance Lists)</p> <p>(Part b is a monitoring policy)</p>
Where Policy Applies	<p>See Figures 2 to 11.</p> <p>WHPA-A & B – V. score 10; WHPA-E – V. score 9</p>
When Policy Applies	Future

Policy ID	T-31-C
Threat	Application, and handling and storage of pesticide
Policy Tool	Education and outreach
Policy Implementer	City of Hamilton, Regional Municipality of Halton
Policy	<p>Where the existing and future application, or handling and storage of pesticide are significant drinking water threats,</p> <ol style="list-style-type: none"> the City of Hamilton and the Region of Halton shall continue their established, related education and outreach programs. In addition, within two years of the date that the updated Source Protection Plan comes into effect, the City of Hamilton and the Region of Halton, in collaboration with the Halton Region and Hamilton Region Conservation Authorities, are requested to undertake an education and outreach program for newly identified threats on pesticide use and storage methods and their potential impacts on drinking water sources. It is recommended that the outreach program include wellhead protection area mapping and target pesticide applicators and exterminators, golf course operators, and farmers. the City of Hamilton and the Region of Halton shall document the nature of any new and existing education and outreach program established regarding the application, and the handling and storage of pesticide, the number of persons contacted, and the location of the participants and report this information to the Source Protection Authority by February 1 of each year.
Legal Effect	Part a - Must comply with - legally binding. List E (Appendix C - Compliance Lists) (Part b is a monitoring policy)
Where Policy Applies	<p>See Figures 2 to 11.</p> <ul style="list-style-type: none"> handling and storage of pesticide: WHPA-A & B – V. score 10; WHPA-E – V. score 9 application of pesticide: WHPA-A & B – V. score 10; WHPA-E – V. score 9 & 8.1
When Policy Applies	Existing and future